

WHAT is claimed is:

1. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and an expansion coefficient under humidity [ratio of expansion (1/%) where a difference of relative humidity (vapor content/saturated vapor amount at 25°C) is increased by 1%] of the protective film is greater than that of the transparent substrate and smaller than $1.7 \times 10^{-4}(1\%)$.
2. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and a Young's modulus of the protective film is greater than that of the transparent substrate, greater than $2.0 \times 10^9(\text{Pa})$ and smaller than $1.0 \times 10^{10}(\text{Pa})$.

3. An optical data recording medium according to any one of claims 1 and 2, wherein a thickness of the protective film is 5 μm or more to 20 μm or less.

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4. An optical data recording medium according to claim 1, wherein the expansion coefficient under humidity of the protective film is 7 or less times as great as that of the transparent substrate, the expansion coefficient under
10 humidity being greater than 7×10^{-6} (1/%) and smaller than 5×10^{-5} (1/%).

5. An optical data recording medium according to any one of claims 1 and 2, wherein the transparent substrate is
15 made of a polycarbonate or a polyolefin and a thickness thereof is about 0.5 mm.

6. An optical data recording medium according to any one of claims 1 and 2, wherein the protective film is made of
20 an ultraviolet light curing resin.

7. A method of selecting a protective film in an optical data recording medium, the optical data recording medium comprising a transparent substrate, a thin film layer formed on
25 the transparent substrate and the protective film which is

mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein, on condition that the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film and the transparent substrate is made of a polycarbonate or a polyolefin with a thickness of 0.5 mm, the protective film is selected such that an expansion coefficient under humidity thereof (ratio of expansion (1/%) where a difference of relative humidity (vapor content/saturated vapor amount at 25°C) is increased by 1%) is greater than that of the transparent substrate and smaller than $1.7 \times 10^{-4}(1/\%)$.

8. A method of selecting a protective film in an optical data recording medium, the optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and the protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein, on condition that the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film and the transparent substrate is made of a polycarbonate or a polyolefin with a thickness of 0.5 mm, the protective film is selected such that a Young's modulus thereof is greater than that of the transparent substrate, greater than $2.0 \times 10^9(\text{Pa})$ and smaller than $1.0 \times 10^{10}(\text{Pa})$.

9. An optical data recording medium provided with a protective film for protecting a thin film layer selected by the method of claim 7 or 8.

10. An optical data recording medium provided with a protective film for protecting a thin film layer selected by the method of claim 7 or 8.